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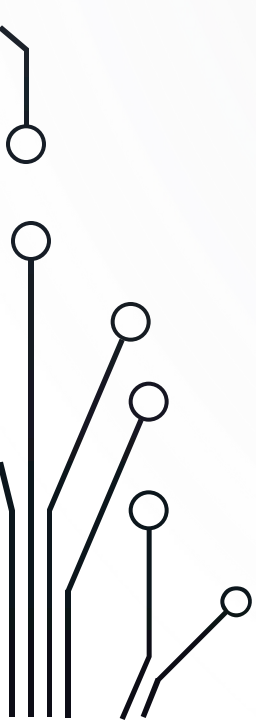
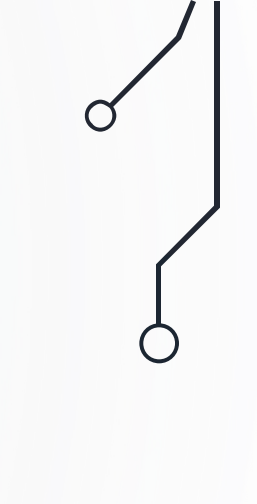
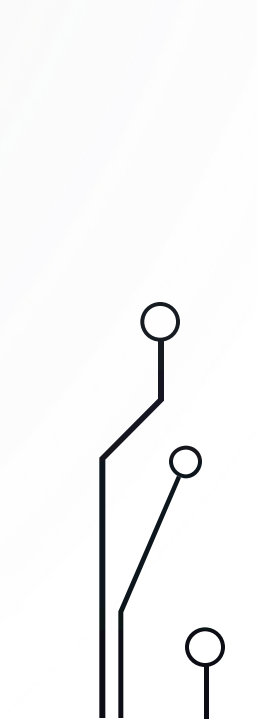
Lanka Education and Research Network

Virtualization and Installation of On-Prem Video Conferencing Platform

Linux Containers



INTRODUCTION TO LXC

- LXC - Linux Containers.
 - LXC command is a client interface for the Linux kernel containment features.
 - LXD is the lightweight container hypervisor.
 - Through a powerful API and simple tools, it lets Linux users easily create and manage containers.
 - The goal of LXC is to create an environment as close as possible to a standard Linux installation but without the need for a separate operating system.
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LXC FEATURES

- LXC can be used in two distinct ways.
 - Privileged - by running the lxc commands as the root user.
 - Unprivileged - by running the lxc commands as a non-root user.
- Templates
 - Creating a container generally involves creating a root filesystem for the container. lxc-create delegates this work to templates, which are generally per-distribution.
- Autostart
 - LXC supports marking containers to be started at system boot
- Apparmor
 - LXC ships with a default Apparmor profile - to protect from accidental misuses of privileges.



CONT'D

- Snapshot /Cloning

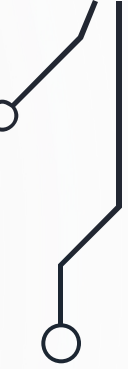
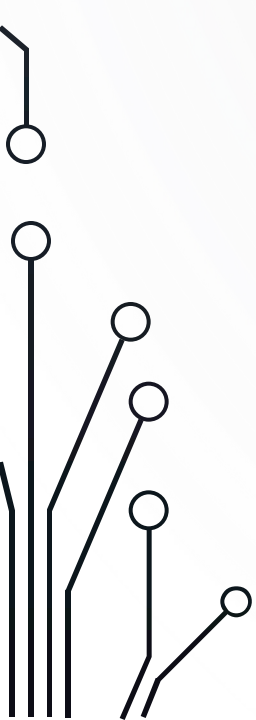
- For rapid provisioning, you may wish to customize a container according to your needs and then make multiple copies of it.

- This can be done with the lxc-clone program.

- Clones are either snapshots or copies of another container.

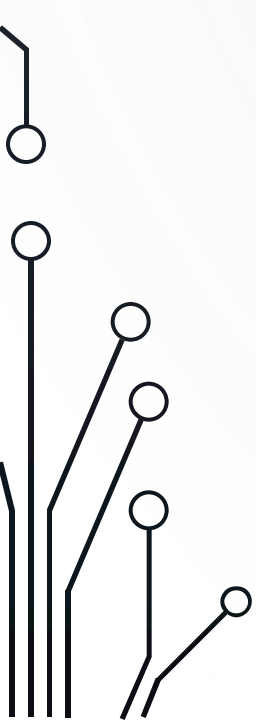
- To more easily support the use of snapshot clones for iterative container development, LXC supports snapshots.

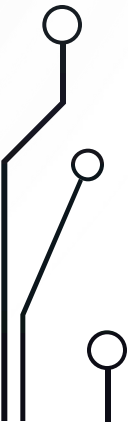
- When working on a container C1, before making a potentially dangerous or hard to-revert change, you can create a snapshot





LXC COMPONENTS

- The liblxc library
 - Several language bindings for the API:
 - python3
 - Lua
 - Go
 - Ruby
 - Haskell
 - A set of standard tools to control the containers
 - Distribution container templates
- 



LXC COMMANDS

```
#Before running lxc for the first time, have to initiate it.
```

```
lxd init
```

```
#Check remote repositories
```

```
lxc remote list
```

```
#Check local repositories
```

```
lxc image list
```

```
#Check remote images.
```

```
lxc image list images:
```

```
lxc image list images:ubuntu
```

```
#Create a Ubuntu Container.
```

```
lxc launch ubuntu:22.04 test-ct
```



CONT'D

```
#List LXC
```

```
lxc list
```

```
#Login to container
```

```
lxc exec test-ct bash
```


```
#Delete a container
```

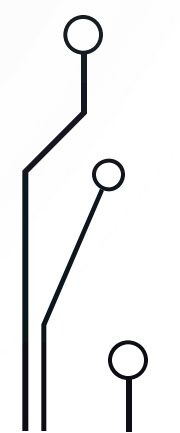
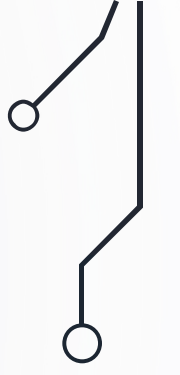
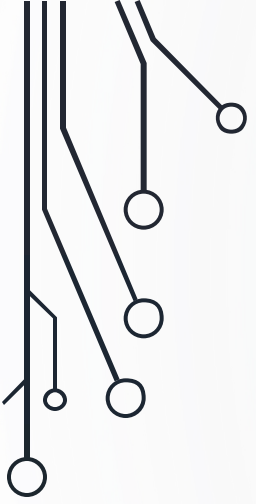
```
lxc stop test-ct
```

```
lxc delete --force test-ct
```

```
#Make a snapshot
```

```
lxc snapshot test-ct test-ct1
```





THANK YOU